ABSTRACT

The present invention provides an improved methodology by which therapeutically to overcome resistance to tetracycline in living cells including bacteria, parasites, fungi, and rickettsiae. The methodology employs a blocking agent such as C5 ester derivatives, or 6-deoxy 13-(substituted mercapto) derivatives of tetracycline, in combination with other tetracycline-type antibiotics as a synergistic combination of compositions to be administered simultaneously, sequentially or concurrently. In another embodiment, certain novel compositions are provided which may be administered alone against, for example, a sensitive or resistant strain of gram positive bacteria such as S. aureus and E. faecalis. The concomitantly administered compositions effectively overcome the tetracycline resistant mechanisms present such that the cell is effectively converted from a tetracycline-resistant state to a tetracycline-sensitive state.